REMARKS

Claims 1, 7-11, 13-24, 28, 30-35 and 37-57 are presented for examination, of which claims 1, 24, 38, 39 and 45 are currently amended. Claims 2-6, 12, 25-27, 29 and 36 have been canceled, without prejudice. Claims 58 and 59 have been added. No new matter has been introduced.

35 U.S.C. § 102

Claims 1, 4, 7-11, 13-24, 27-28, 30-35, and 37-57 have been rejected under 35 U.S.C. §102(e) as being anticipated by Takala et al., U.S. Pat. No. 6,788,294 (Takala).

Regarding claim 1, Applicants disclose and claim a method of changing the visual appearance of a designated area of an exposed surface of a discrete, manipulable key of keypad. The method includes providing a keypad with a circuit board carrying switches, and multiple keys displaceable toward the circuit board to activate a corresponding switch. Each key includes a visible area, at least one of the areas includes a designated area containing a field-stable electrophoretic ink. The method also includes passing a field through only selected regions of the field-stable electrophoretic ink in the designated area to alter a visual characteristic of the ink in the selected regions to form a desired graphic label visible within the designated area.

Claim 1 has been amended to more clearly define the scope of the claimed invention. According to the invention, as now more clearly claimed, the keys include discrete manipulable keycaps, each having a predefined physical shape. And, the ink is visible from an exposed surface of the manipulable keycap.

Takala does not teach or suggest "providing a keypad with ... multiple keys ... each key having a visible area, at least one of the areas comprising a designated area containing a field-stable electrophoretic ink, ..: wherein the keys include discrete manipulable keycaps, each having a predefined physical shape, and wherein the ink is visible from an exposed surface of the manipulable keycap." Instead, Takala describes a customizable user interface similar to a touch screen keypad. (Col. 1, lines 46-50). More specifically, Takala describes a multi-layer "key element" including "a layer of material whose volume is responsive to the magnitude of an electric or magnetic field." (Col. 3, lines 57-60). Individual tactile elements, or "selectors," can

be formed (i.e., "raised") on the flat surface of a display by controlling the magnitude of an electric or magnetic field applied to the layer comprising the material whose volume expands with the added magnitude of the electric and/or magnetic field. (Col. 4, lines 14-20; *see also* col. 4, lines 46-47). "[T]he selectors are clearly distinguished from the surrounding surface by their height. The differences in the key surfaces create a clear user interface where the boundaries between different selectors are clearly distinguishable and detectable *by touch*." (Col. 3, lines 22-27). However, according to Takala, "the key-based user interface has a flat surface when the electric field is switched off." (Col. 4, lines 46-47). Takala also points out that the user interface can be implemented "in different electronic devices in such a way that all the devices can retain their separate user interfaces." (Col. 3, lines 46-50). Thus, Takala provides a user interface that can be *physically customized*, i.e., the arrangement of the selectors, or tactile inputs, can be adjusted to form an application specific user interface for integration into different applications, e.g., a remote control for a television, a camera, the keyboard of a computer, etc., (see, e.g., col. 3, lines 30-56); however, Takala does not provide discrete keys that can be *visually changed* by altering a visual characteristic in a visible area of at least one of the keys, as in the claimed configuration.

Furthermore, Takala neither teaches nor suggests "passing a field through only selected regions of the field-stable electrophoretic ink in the designated area (of at least one of the keys) to alter a visual characteristic of the ink in the selected regions to form a desired graphic label visible within the designated area." Although Takala may disclose the use an E-ink, Takala describes the use of an E-ink in a context different from that of the electrophoretic ink of the claimed configuration. Specifically, Takala describes the use of a layer of E-ink in the context of an electronic drawing board, i.e., for controlling imaging, e.g., "by darkening the surface at [a] touched spot and keeping the background light," on a flat drawing surface (i.e., the display of a touch screen, not an exposed surface of a manipulable keycap) (*see*, e.g., col. 4, line 55-col. 5, line 12); and/or as "a layer that can be used to display patterns such as text on the surface of the key element." (Col. 5, lines 50-55). Perhaps some confusion lies in the fact that what Takala refers to as a "key element" apparently relates to the user interface upon which tactile elements (i.e., "selectors") can be formed, as opposed to, for example, one of the "selectors." However, Takala does not describe, or even suggest, the use of a field-stable electrophoretic ink in altering

a visual characteristic in a visible area of at least one discrete key of a keypad (i.e., by passing a field through the field-stable electrophoretic ink). Thus, to the extent that the Examiner suggests that Takala discloses "the claim limitation that the keys have discrete, manipulable keycaps, and wherein the ink is visible from an exposed surface of a manipulable keycap," *see*, e.g., Office Action of November 16, 2005, pages 7 and 14, Applicants contend that this is not an accurate reading of the cited prior art.

Accordingly, Takala does not disclose all of the features of the claim 1, and, therefore, Applicants respectfully request that this rejection be withdrawn. As claims 7-23 depend from claim 1, Applicants submit that claims 7-23 are allowable for at least the same reasons.

Regarding claim 24, this claim has been amended to recite: "wherein the keys include discrete manipulable keycaps, each having a predefined physical shape, and wherein the ink is visible from an exposed surface of the manipulable keycap," features, as discussed above with regard to claim 1, not described by Takala. Therefore, Applicants respectfully request that this rejection be withdrawn.

Claims 28, 30-35, and 37 depend from claim 24 and are allowable for at least the same reasons.

Regarding claim 38, this claim has been amended to recite, in pertinent part: "A method of changing the visual appearance of keys of a keypad, the method comprising providing an assembled keypad with at least one key having an elevated, exposed key surface manipulable by a user to depress the key relative to the keypad, the key containing multiple electrically conductive elements electrically isolated from each other and disposed to overlap in plan view, with each conductive element having a predetermined shape and configured to provide a graphic image corresponding to the predetermined shape when exposed to an electric field, the graphic image being visible from the exposed key surface ..."

Takala neither teaches nor suggests "a keypad with at least one key ... containing multiple electrically conductive elements electrically isolated from each other ... with each conductive element having a predetermined shape and configured to provide a graphic image corresponding to the predetermined shape, when exposed to an electric field." Rather, Takala describes a

layered "key element" including "a layer of material whose volume is responsive the magnitude of an electric and/or magnetic field, the purpose of this layer being to raise a certain area of the key element surface from the surrounding area and thus indicate an area of the surface that can be used." (Col. 5, line 55-col. 6, line 5). "The layer comprising the material whose volume is responsive to the field magnitude is controlled by an electric and/or magnetic field matrix ... that is formed of a set of electrodes and/or coils." (Col. 6, lines 12-15; *see also* FIGS. 1 and 2). "An increase in the electric and/or magnetic field in a given position of the matrix will increase the volume of the layer of material whose volume is responsive to the field matrix, in the corresponding position." (Col. 6, lines 17-20). Thus, Takala provides a tactile output in the form of a raised key surface corresponding to an electric or magnetic field produced by a matrix of electrodes and/or coils, rather than a visible output in the form of a graphic image corresponding to the shape of a conductive element.

Accordingly, Takala does not describe all of the features of claim 38, and, therefore, Applicants respectfully request that this rejection be withdrawn.

Regarding claim 39, this claim has been amended to more clearly define the scope of the claimed invention. As amended, claim 39 recites: "A method of changing a visual appearance of a designated area of a data input device, the method comprising: placing a printer capable of generating a field in a position external to the device and adjacent an exposed outer surface of the device; and passing a field from the printer through the designated area of the device to remove a previously applied graphic label from the designated area while forming a new graphic label within the designated area."

Takala does not teach or even suggest "placing a printer capable of generating a field in a position external to [a] device and adjacent an exposed outer surface of the device; and passing a field from the printer through [a] designated area of the device to remove a previously applied graphic label from the designated area while forming a new graphic label within the designated area." As discussed above, Takala describes a layered key element (i.e., a user interface similar to a touch screen). The key element includes a layer of material whose volume is responsive to a field magnitude. (Col. 5, line 66-col. 6, line 5). The layer is controlled by a field matrix that is formed of a matrix of electrodes and/or coils disposed on an internal layer of the key element

(i.e., internal to the device). (Col. 6, lines 5-20; *see also* FIGS. 1 & 2). As a result, "selectors" can be formed (i.e., "raised") on the surface of the key element by "using the appropriate control matrix to increase the magnitude of the electric or magnetic field applied to the layer comprising a material whose volume expands with the added magnitude of the electric and/or magnetic field." (Col. 4, lines 16-20). Thus, Takala provides an internal layer including a matrix of electrodes and/or coils for producing a tactile output on a user interface, rather than an external printer for adjusting a graphic label visible within a designated area of a data input device, as in the claimed configuration.

Accordingly, Takala does not describe all of the features of claim 39, and, therefore, Applicants respectfully request that this rejection be withdrawn. As claims 40-42 depend from claim 39, Applicants submit that claims 40-42 are allowable for at least the same reasons.

Claim 43 is directed to a method of altering format of previously entered text through a keypad, and features detecting manipulation of a specific key of the keypad, and in response to detecting manipulation, replacing a displayed, selected text with a differently formatted version of the selected text, according to a predetermined series of formats through which the selected text is cycled upon multiple, sequential manipulations of the specific key.

The portions of the cited prior art reference that the Examiner relies on as the basis for the rejection of claim 43 suggest, for example, that the described user interface can be modified by raising and lowering regions on the surface to form selectors. Specifically, the Examiner points to a portion of Takala that describes that the user interface can be "customized whenever necessary, so a separate user interface is not necessary when requirements change ... language specific settings, for example, can be done preferably when the key pad is sold to the customer," (Col. 3, lines 9-20). The Examiner also cites Takala for teaching that the user interface can be used to integrate different electronic devices into one in such a way that all the devices can retain their separate user interfaces, giving the following as an example: "when changing over from [a] computer application to [a] camera application, the user interface can preferably be changed from a word processor key board ... into a camera user interface." (Col. 3, lines 30-56). Next the Examiner points to a portion of the reference that describes a layer of E-ink material "that can be used to display patterns such as text on the surface of the [user interface]" by placing micro-

capsulated pixels in the E-ink layer and controlling the same with an electric field matrix. (*See,* e.g., col. 5, lines 50-55). Thus, as mentioned above, Takala describes a user interface that can be physically modified (i.e., user inputs can be reshaped and reformed) according to application specific requirements, and/or a user interface that may display text. However, the Examiner has not identified, nor have the Applicants found, anything in the Takala reference that either teaches or suggests the cyclical reformatting of displayed text in response to the multiple, sequential manipulation of a specific one of the device keys.

Therefore, since Takala fails to describe all of the features of claim 43, Applicants respectfully request that this rejection be withdrawn. As claim 44 depends from claim 43, Applicants submit that claim 44 is allowable for at least the same reasons.

Regarding claim 45, Applicants have amended this claim to clarify the scope of the claimed invention and respectfully request reconsideration of the rejection of claim 45 in light of these amendments and the following remarks.

As currently amended, claim 45 is directed to a method of altering information displayed on an operable, designated data input area of a data input device, and features providing a data input device with multiple data input areas having visible labels associated with the input areas, and transmitting a signal to the data input device from a remote location to alter the visible label of at least one of the data input areas of the data input device in response to the signal.

Takala fails to teach or suggest "transmitting a signal to the input device from a remote location to alter the visible label of at least one of the data input areas of the device in response to the signal." In response to arguments previously presented by the Applicants, the Examiner relies on the "inherent" teachings of Takala to support the rejection of claim 45. Specifically, the Examiner refers to an example identified in the Takala reference suggesting that the user interface described therein can be incorporated in a remote control for a text TV set. The Examiner infers that "[b]y pressing keys on a keypad at the remote location for controlling a text TV set, a user transmits a signal to the TV set from a remote location to alter the visible label of eat [*sic*] least one of the data input areas of the device." The Examiner appears to be equating the text TV set in the above example with the data input device of the claimed configuration; however, setting aside the issue of whether Takala meets the standards of an anticipatory

reference on the principle of inherency, the Examiner fails to provide any support for the suggestion that a text TV set includes, either explicitly or implicitly, multiple data input areas having visible legends associated with those areas.

For further support of this position, the Examiner provides another example suggesting that "a user can also press a keypad directly in a touch sensitive display to transmit a signal to a computer *in which the computer acts as the input device* because the touch sensitive display may be remotely located from the computer. By pressing a key exposed on the touch panel, a user effectively transmits a signal to the computer from the display device to alter the visible label of the data input areas of the computer in response to the signal." (*See* Office Action, page 5). Again, Examiner fails to provide any support for the proposition that a computer, as suggested in the above example, either explicitly or implicitly includes multiple data input areas having visible legends associated with those areas.

Therefore, for at least the reasons discussed above, Applicants submit that claim 45 is patentable over Takala. In addition, if assertions made on behalf of the Applicants are regarded as incorrect, Examiner is respectfully requested to quote verbatim the language in the reference regarded as corresponding to each element of the rejected claim.

As claims 46-57 depend from claim 45, Applicants submit that claims 46-57 are patentable for at least the same reasons.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be constructed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Enclosed is a $43.00 check for excess claims fee and a check for $510.00 for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, referencing attorney docket number 13159-012001.

Respectfully submitted,

Date: May 15, 2006

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